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large coriaceous auricles, smooth and shining on the upper surface, and canescent beneath. The normal form has double the number of leaflets, which are narrowly lanceolate, and drawn out into a long narrow point. Nothing could be more unlike than the two forms. There were three trees near each other, among many hundreds of the normal form, all of which appeared to have come up in a measure naturally along fence rows in an old field. The broad shining leaflets gave the trees so marked an appearance as to attract attention from a long distance. They were seed-bearing (female) trees, as were many others of the normal form near them. It was, therefore, a great point gained to be able to show that the case was not one of sexual variation, to which many cases of dimorphism were properly referred. Another very interesting fact was that a branch of the normal form came out of one of the trees, and it was from this branch that the normal leaf now exhibited was taken. The laws regulating these variations seemed still obscure.

On the Feeding of Dinamœba.—Prof. LEIDY remarked that bias frequently proved to be an obstacle in the way of research. In his study of the rhizopods, he had repeatedly watched different kinds of *Amœba* for long periods with the view of ascertaining their usual mode of feeding. Ordinary experience had prepossessed him to direct his attention to the forepart of the body, that is to say, the part in advance in the movements of the animal, as the point at which food would be taken. He had been surprised at the rarity of the occurrence in which he had seen *Amœbæ* swallow food when the apparent greediness of the animal was taken into consideration. In the last number of the Popular Science Review, there is an interesting article, by Mr. P. Martin Duncan, entitled "Studies amongst *Amœbæ*." From this he learned, from the observations of Mr. Duncan, that the *Amœbæ* habitually take their food at what may be considered the posterior part of the body. With this hint, he examined specimens of the curious amœboid animal, described under the name of *Dinamœba*, of which he had recently obtained a good supply from the ditches of a cranberry field at Atco, New Jersey. He had since on several occasions had the opportunity of seeing the *Dinamœba* take its food, which was done, as indicated by Mr. Duncan, at the posterior part of the body. One instance appeared to him to be particularly interesting, and was related as follows:—

Seeing a specimen of *Dinamœba* with its left side in contact with a filament of the alga *Bambusina Brebissonii*, he was led to watch it. On closer examination it proved that the alga entered to the left of the tail and extended through the body, causing a slight bulge of the ectosarc by its other end to the left of the head. The *Dinamœba* became slightly elongated, and the alga sunk more inwardly from behind. The former moved with an inclination to the right, causing the alga to assume an oblique position from left to right. The anterior end of the alga suddenly protruded from the body of the animal, so that this appeared to be pierced by it. In this condition the alga entered the *Dinamœba* to the left of the tail, and protruded at the right of the head. Gradually the alga was made to assume a transverse position. The right extremity of the alga now became depressed and the left elevated, so that the alga assumed nearly its original position, in which it appeared to perforate the left border of the animal obliquely from the tail end. It gradually acquired a central position, penetrating the animal from tail to head. The *Dinamœba* now elongated at both ends, a third greater than its former length, extending in a fusiform manner upon the alga. The animal next doubled upon itself, so that both ends of the alga approached in front and protruded side by side from the head. One extremity of the alga then sunk within the *Dinamœba*, and subsequently the other extremity, so that the filament, about three times the length of the animal, became coiled up within it.

The observation of swallowing the *Bambusina* was made in the afternoon of September 15. In the evening, several hours after the first observation, on looking at the *Dinamœba*, which had been preserved in an animalcula cage, it was observed sitting, as it were, on a large filament of the alga *Didymoprium Grevilii.* The posterior end of the animal extended as a cylindrical expansion along the alga to a greater length than the breadth of the body of the *Dinamœba*, and so closely clasped it as to contract the gelatinous envelop of the alga to little more than the thickness of the green cells. After some time the alga suddenly broke, and the two portions were gradually bent backward and made slowly to approach, so as to become parallel with each other. One of the pieces was then drawn within the animal a convenient length, broken off, and completely swallowed, and this was followed by a similar movement of the other piece. Shortly after the first rupture of the alga, when the two portions projected at an obtuse angle from the back portion of the *Dinamœba*, the animal contracted in length, and discharged from the right side a mass of bodies, which consisted of the separated cells of *Bambusina*, probably from the filament it had swallowed in the afternoon.

Prof. Leidy continued that the two successive observations in the feeding of *Dinamœba* appeared to be particularly fortunate, as they apparently explained certain facts in the habits of the animal. *Dinamœba* had been noticed to be especially fond of the alga *Didymoprium*, for it was found to be present as the principal element of the food in numerous specimens. *Bambusina* was less frequently found among the food contents of the animal. The algæ were equally abundant in the localities of the *Dinamœba;* and, from the observations detailed, it would appear that the *Didymoprium* is preferred as food from the comparative ease with which its filaments are broken into pieces of convenient size for swallowing.

The observations are, moreover, interesting from their indicating discrimination and purpose in the movements of one of the simplest forms of animal life. The movements are to be viewed as reflex in character, though resembling the voluntary movements by which the most intelligent animal would prepare morsels of food of convenient form to take into the mouth. In striking contrast were the movements, noticed on several occasions, by which an *Oscillatoria* obtained entrance into the empty shell of an *Arcella*, and there, coiled up, crept round and round incessantly.

Concretions resembling Bones.—Prof. LEIDY directed attention to some large specimens on the table which had been sent to the Academy for his inspection. They had been recently mentioned in the daily papers as bones of a large reptile found in the coal-measures of Hazleton, Pa. Though presenting a remote resemblance to bones, one of which especially looked like the coracoid of a reptile, they proved to be nothing but irregular nodules or concretions of iron ore, or limonite.

Mineralogical Notes.—Professor GEO. AUG. KŒNIG placed on record a determination of Ankerite from the Phœnixville tunnel. Professor Genth mentions the occurrence of this mineral at the Phœnixville mines in curved rhombohedral crystals, but usually in yellowish-white, crystalline, granular masses. An analysis by Dr. W. P. Headden is given (see below) (Prel. Report on the Mineralogy of Penna., 1875). The specimens from the tunnel present crusts, one-quarter of an inch thick, covered with brown, well-defined rhombohedrons, whose faces do not show any curvature. Underneath this brown crystalline surface the mineral is colorless, and possesses very brilliant vitreous lustre. Small cleavage pieces are perfectly transparent.

The angle of the rhombohedral pole edge was found by the speaker = 105° 59′, differing slightly from measurements of other localities, as 106° 12′ (Molls), and 106° 6′ (Ettling). The components of Ankerite are the carbonates of calcium, magnesium, and iron, whose rhombohedral angles are respectively 105° 5′, 107° 29′, and 107°. It is clear that the angle of a mixture of the three must lie between the extremes, and must occupy a distinct relation to their respective quantities. As those are known to vary between magnesium and iron, the angles must necessarily vary accordingly.

Specific gravity = 2.953, at 22° C.

The mineral was analyzed at the speaker's request by his assistant, Mr. R. B. Chipman, with the following result:—